



BROCHURE  
**SCHOOL OF  
AGRICULTURAL  
SCIENCES**

81, Nilgunj Road, Agarpara,  
Kolkata, PIN: 700109  
West Bengal





PROF. D. D. PATRA  
 FNASc, FNAAS, FISSS, FISA, FWAST  
 Director  
 School of Agricultural Sciences  
 81, Nilgunj Road, Agarpara, Kolkata 700 109  
 Former Chief Scientist, CSIR-CIMAP, Lucknow  
 Ex-Vice-Chancellor, BCKV, Nadia, West Bengal



The agricultural sector is getting more complex due to staggering increase in population, globalization, urbanization, impact of climate change, expanding demand of food, sustaining food security and nutrition security. World population is expected to be enhanced to 6 billion by 2150 requiring another 50% increase in food production. As per FAO Report, Indian population is going to surpass China's population in less than 10-year time. On the other hand, land area is tremendously decreasing due to rapid urbanization, industrialization and degradation of natural resources resulting in stagnation or declining in food productivity. There is a need to develop technologies to have more crops per unit area of land, unit amount of fertilizer, unit volume of water and unit of energy. Climate change is expected to decline decrease crop productivity, enhance infestation of crops with insect pests and diseases. Situation necessitates a renewed thrust for better quality higher agricultural education, research and extension. The need of the hour is to have human capital of highly qualified, motivated, devoted and well-trained agricultural graduates to meet the challenges.

In this context, JIS University is determined to produce high quality agricultural graduates and budding scientists, teachers, and entrepreneurs armed with best quality training by highly qualified teachers, supported with well-equipped laboratories, library, smart classrooms and sprawling teaching and research farm. I sincerely hope that the students will get top quality training, exposure and work on hand experience in the School of Agriculture under JIS University, one of the leading and very organized Teaching Hub in the country. Our mission includes fostering all-round development of students through multi-faceted education and sustained engagement with local, national and global communities, and nurture lifelong inspired learners from across the globe in line with our cultural idea of '**Vasudhaiva Kutumbakam**'.

DD Patra

### *Our Director-----*

Prof Dharani Dhar Patra, an Academician, Teacher and Researcher par excellence, is an internationally known Soil Scientist and Medicinal and Aromatic Plant Scientist. A very brilliant student, ranked in all his examinations starting from Higher Secondary Examinations to his Doctoral Programme. Professor Patra did his PhD from Indian Agricultural Research Institute, IARI, New Delhi. followed by Post-Doctoral Research at Rothamsted Experimental Station, UK, under Commonwealth Fellowship. He started his career as an Assistant Professor at Rajasthan Agricultural University, Bikaner, Rajasthan and then shifted to CSIR-Central Institute of Medicinal and Aromatic Plants. His 28 years tenure at CSIR-CIMAP, help him get an opportunity to work on some burning areas viz. enhancing N use efficiency in soil-plant system by developing natural product coated urea; Isolation, characterization and elucidating the biological activities of extremophiles and their active ingredients (anticancer, tested in human cell). His work on phytoremediation of heavy metal polluted tannery sludge contaminated soil through aromatic and terrestrial grasses is widely acclaimed. His other research contribution also includes Utilization sodic soils (pH 11.8, ESP 25) by aromatic grasses (Vetiver and Lemongrass, Recycling of distillation waste for sustaining soil fertility restoration. His PhD research on 'Precise Estimation of Dinitrogen by Legumes and Concurrent Transfer of Fixed N to Companion Cereal in a cereal-legume Mixed Cropping System Using Dual Labeling of  $^{15}\text{N}$ , a Stable Isotopes internationally acclaimed. Prof Patra has published more than 200 Research papers, 27 Review Articles, 06 Books, 18 Book Chapters and 29 Technical Bulletins, granted 14 Patents, has been co-inventor of 08 varieties of Medicinal and Aromatic Plants.

Prof Patra has been Visiting Professor/Scientist in many universities abroad (Tokyo University, Japan HNAES, Japan, Reading University, UK etc).

He is a Fellow of National Academy of Sciences, India, National Academy of Agricultural Sciences, New Delhi, West Bengal Academy of Science and Technology, Kolkata, Indian Society of Soil Science, New Delhi and Indian Society of Agronomy, New Delhi.

He is a Chairman and Member of several Committees viz. ICAR, CSIR, Dr RP Agricultural University, Samastipur, Bundelkhand University, Jhansi, Institute for Aromatic Crops, Dehradun, Dr Babdaheb Ambedkar University, Lucknow etc.



## Our Vision

To become world leader by establishing centres of excellence in the fields of higher education, research, entrepreneurship and skill development. Our vision is a future in which all young people have the chance to reach their full potential through satisfying careers that will enable them to significantly contribute to the society and the nation

## Our Mission

The mission of the university is to prepare quality human resource and to provide world class graduates through quality proper education, training and exposure.



Prof. D D Patra delivering key note address in the 87<sup>th</sup> Annual Convention of Indian Society of Soil Science at Palli Shiksha Bhavana, Sriniketan, Visva Bharati, Santiniketan



## Agriculture as a career prospect

India is an Agricultural Country. Agriculture and its allied activities act as main source of livelihood for more than 80% population of rural India. It provides employment to approximately 70% of labour in cultivation and processing. Its contribution to Gross Domestic product (GDP) is about 29%. At the time of Independence, and after that up to 1960s India faced severe food grain shortage. Thanks to Green Revolution, India achieved spectacular growth in agricultural production. India today is self-sufficient in most of the food grains despite population increase. The food grain production of India increased from 51 million tons in 1950 to about record 300 million tons in 2019-20. The main enigma is still there in staggering increase in population. Indian population is expected to surpass the population of China by next ten years.

In order to sustain the food security and nutrition security, diversify and realize the potential of agriculture sectors, it is necessary to develop skilled human resources. There is a need of dedicated and well-trained Agricultural Graduates.

Indian Agriculture needs modern technologies to sustain food security and nutrition security to 1.40 billion Indians. Agrotechnology and Agrotechnicians will be in high demand to bring a second Green Revolution. Besides, there are plenty of scope for agricultural graduates both in public and private sectors and making it more with yet higher studies e.g M Sc(Ag) and PhD in different subjects



### Careers Scope and Opportunities for Agriculture Graduates

BSc Agriculture graduates have ample job opportunities in the government as well as private sector.

Nationalized Banks	Agricultural Field Officer/Assistant Manager, Probationary Officer
State Governments	Assistant Directorate of Agriculture (ADA), Agricultural Officer, Farm Manager
Corporate Sectors	Seed producing Companies, Companies producing Agri-chemicals, Bio fertilizers, Microbial fertilizers, etc
Higher education (MSc and PhD)	<ul style="list-style-type: none"><li>✓ Agriculture Research Scientist (ARS),</li><li>✓ Assistant Professor in Universities,</li><li>✓ Post-Doctoral research,</li><li>✓ Subject Matter Specialist in different Krishi Vigyan Kendras (KVKs)</li><li>✓ Extension Officer</li><li>✓ Plant Protection officer</li><li>✓ Food Safety officer</li><li>✓ Officer in Quality Assurance in Related Fields</li><li>✓ Extension Officer</li><li>✓ And many more...</li></ul>

The agriculture sector is becoming more modern, scientific and technology-oriented. Shifting farm structures, changing demographics in the food production system, evolving biotechnology strategies, resource management strategies, are playing a major role in the food production and management systems. Specialization in agriculture opens up a world of possibilities for students who have chosen to pursue education in Agriculture.



## About JIS University

JIS Group Educational Initiatives - the largest educational conglomerate of Eastern India with 30 Institutions, 140 programmes and 37,000 students began its journey 21 years back. The journey, though not easy, has been quite a successful one. JIS University was established through the Legislative Act of the Government of West Bengal, viz. JIS University Act, 2014 (West Bengal Act XXII of 2014) that came into force in February, 2015. The University has a mission to be one of the top-class universities in India and a preferred destination for students, research scholars and faculty members alike. Students aspiring to study in JIS University can be assured of quality education as all courses are duly accredited and affiliated by University Grants Commission (UGC), New Delhi; All India Council for Technical Education (AICTE), Bar Council of India (BCI), Pharmacy Council of India (PCI), National Council for Teacher Education (NCTE) and United Nations Academic Impact (UNAI). JIS University is also a member of Association of Indian Universities (AIU) since 2017. JIS University has an objective to provide instructions, teaching, training and research in various branches and specialized fields of Science, Engineering & Technology, Pharmacy, Management, Law, Social Sciences and Education. The University besides offering the traditional undergraduate and postgraduate degrees, in Physics, Chemistry, Geology, Biotechnology, Microbiology, etc, also offers other integrated degrees such as BBA-LLB (H). Apart from the above disciplines, JIS University has now started the B.Sc. (Hons.) Agriculture course which is considered to be the most job-oriented program.

### Affiliation and Recognition

JIS University is affiliated and recognized by University Grants Commission (UGC), Association of Indian Universities (AIU), All India Council of Technical Education (AICTE), Pharmacy Council of India (PCI), National Council for Teacher Education (NCTE), Bar Council of India (BCI), United Nations Academic Impact (UNAI) and Scientific and Industrial Research Organization (SIRO).



## Why BSc (Ag) in JIS University



- Director of School of Agricultural Sciences Prof DD Patra (Ex-Vice Chancellor, BCKV) is a scientist of national and international repute
- Highly qualified and trained faculties.
- Governing Body Members are from Industry and Academia.
- Sophisticated laboratory and class room.
- State-of-the-art Infrastructure with a Wi-Fi-enabled and Eco-friendly campus with a well-stocked library, spacious seminar hall, conference hall and smart classroom.
- World class teaching environment with highly educated, industry experienced and trained faculty members.
- Strategic tie-ups with Multi-National Companies like ADAMA India, Bayer Crop Science, and others
- Internship programmes by several MNCs offered.
- Nurturing innovative skills among students with the help of Entrepreneurship Development cell and Technology and Business incubation
- Regular field and industrial visits, providing hands-on training to students.
- Extraordinary placement assistance and grooming sessions provided by an extremely active Placement Cell.
- Education through comprehensive online Digital Knowledge Repository with video and audio lectures on all subjects.
- Top quality hostel facilities are provided to the students.
- Research and Development activities, collaboration with other reputed institutions would enhance students' academic career.
- Extracurricular activities like debates, quizzers, talks, drama, photography, NSS to ensure overall development of students.
- Avail suitable placement opportunities for final year students in the industry both in terms of numbers and brand quality.
- Overall career guidance, organized training workshops on popular trends and technologies that are vogue in the industry.
- Assured self-employment with Agri-Business Programme.





## Mandate

- To teach agricultural subjects in under graduate honours level.
- To serve as a centre of academic excellence in agricultural education.
- To bring innovations in agricultural research and technologies.
- To evolve new technologies and concepts related with agriculture.
- To carry out the extension activities



Distribution of Courses & Credits for the Degree of  
B.Sc. (Hons.) Agriculture

1st Semester

Sl. No.	Course No.	Title of Course	Credit(s)
1	AG 101	Agriculture Heritage*	1(1+0)*
2	AGR 102	Fundamentals of Agronomy I	2(1+1)
3	ACSS 103	Fundamentals of Soil Science I	2(1+1)
4	AEN 104	Fundamentals of Agricultural Entomology I	3(2+1)
5	PPA 105	Fundamentals of Plant Pathology I	2(1+1)
6	ABC 106	Fundamentals of Plant Biochemistry	3(2+1)
7	HORT(A) 107	Fundamentals of Horticulture	2(1+1)
8	SWAG 108	Introduction to Forestry	2(1+1)
9	AEX 109	Rural Sociology and Educational Psychology	2(2+0)
10	ENG 110	Comprehension and Communication Skills in English	2(1+1)
11	AST 111	Elementary Mathematics*	1(1+0)*
12	NSS 112	NSS/NCC/Physical Education and Yoga Practices	1(0+1)**
		<b>Total</b>	<b>20+2*+1**</b>

\*R (Remedial Course), \*\*NC (Non-Gradual Course)

## 2nd Semester

Sl. No.	Course No.	Title of Course	Credit(s)
1	AGR 151	Fundamentals of Agronomy II	2(1+1)
2	AGR 152	Crop Production Technology I (Rabi crops)	2(1+1)
3	ACSS 153	Fundamentals of Soil Science II	2(1+1)
4	AEN 154	Fundamentals of Agricultural Entomology II	2(1+1)
5	PPA 155	Fundamentals of Plant Pathology II	2(2+0)
6	GPB 156	Fundamentals of Genetics	3(2+1)
7	PPH 157	Fundamentals of Crop Physiology	2(1+1)
8	AEC 158	Fundamentals of Agricultural Economics	2(2+0)
9	AEX 159	Fundamentals of Agricultural Extension Education	3(2+1)
10	SWC 160	Soil and Water Conservation	2(1+1)
11	ASC 161	Livestock and Poultry Management	3(2+1)
12	ET 162	Educational Tour	1(0+1)**
		<b>Total</b>	<b>25+1**</b>

\*\*NC (Non-Gradual Course) preferably during summer vacation

**3rd Semester**

Sl. No.	Course No.	Title of Course	Credit(s)
1	AGR 201	Crop Production Technology II (Kharif crops)	2(1+1)
2	GPB 202	Fundamentals of Plant Breeding	3(2+1)
3	ACGP 203	Agricultural Microbiology	2(1+1)
4	AEN 204	Pests of Crops and Storage and their Management	3(2+1)
5	PPA 205	Diseases of Field and Horticultural Crops and their Management I	2(1+1)
6	AEC 206	Agricultural Finance and Co-operation	3(2+1)
7	AEX 207	Communication Skills and Personality Development	2(1+1)
8	ACH 208	Crop Protection Chemicals and their applications	2(1+1)
9	HORT(A) 209	Production Technology for Vegetables and Spices	2(1+1)
10	AEG(A) 210	Farm Machinery and Power	2(1+1)
11	HVE 211	Human Values and Ethics	1(1+0)**
		<b>Total</b>	<b>23+1**</b>

\*\*NC (Non-Gratual Course)

**4th Semester**

Sl. No.	Course No.	Title of Course	Credit(s)
1	AGR 251	Crop Production Technology III (Rabi crops)	2(1+1)
2	AMP 252	Agro-meteorology and Climate Change	2(1+1)
3	SST 253	Principles of Seed Technology	3(2+1)
4	GPB 254	Crop Improvement I (Rabi crops)	2(1+1)
5	ACSS 255	Manures, fertilizers and Soil Fertility Management	3(2+1)
6	PPA 256	Diseases of Field and Horticultural Crops and their Management II	2(1+1)
7	AEC 257	Agricultural Marketing, Trade and Prices	3(2+1)
8	AST 258	Elementary Statistics	3(2+1)
9	HORT(A) 259	Production Technology of Fruit and Plantation Crops	2(1+1)
10	EC 260-266	Elective Course (see page nos. 4-5)	3*(2+1)
		<b>Total</b>	<b>22+3*</b>

**5th Semester**

Sl. No.	Course No.	Title of Course	Credit(s)
1	AGR 301	Crop Production Technology IV (Kharif crops)	2(1+1)
2	AGR 302	Rainfed Agriculture and Watershed Management	2(1+1)
3	GPB 303	Crop Improvement II (Kharif crops)	2(1+1)
4	ABT 304	Principles and Practices of Agricultural Bio-Technology	2(1+1)
5	ACSS 305	Problematic Soils and their Management	2(1+1)
6	AEPP 306	Principles of Integrated Pest and Disease Management	3(2+1)
7	AEC 307	Farm Management, Production and Resource Economics	2(1+1)
8	AEX 308	Entrepreneurship Development and Business Communication	2(1+1)
9	HORT(A) 309	Production Technology of Ornamental Crops, MAP and Landscaping	2(1+1)
10	MPHR 310	Protected Cultivation and Secondary Agriculture	2(1+1)
11	EC 311-318	Elective Course (see page nos. 4-5)	3*(2+1)
<b>Total</b>			<b>21+3*</b>

**6th Semester**

Sl. No.	Course No.	Title of Course	Credit(s)
1	AGR 351	Principles of Organic Farming	2(1+1)
2	AGR 352	Farming System and Sustainable Agriculture	2(1+1)
3	GPB 353	Intellectual Property Rights	1(1+0)
4	AEN 354	Management of Beneficial Insects	2(1+1)
5	AGMP 355	Geo-informatics and Nanotechnology for Precision Farming	2(1+1)
6	AST 356	Computer Applications and Agriculture Informatics	2(1+1)
7	HORT(A) 357	Post-harvest Management and Value-addition of Fruits and Vegetables	2(1+1)
8	AEG(A) 358	Renewable Energy and Green Technology	2(1+1)
9	FSN 359	Principles of Food Science and Nutrition	2(2+0)
10	ES 360	Environmental Studies and Disaster Management	2(1+1)
11	EC 361-368	Elective Course (see page nos. 4-5)	3*(2+1)
<b>Total</b>			<b>19+3*</b>



**Rural Agricultural Work Experience &  
Agro Industrial Attachment (RAW&AIA)**

7th Semester

Sl. No.	Course No.	Title of Course	Credit(s)
1	RAW&AIA 401	Rural Agricultural Work Experience and Agro Industrial Attachment	20(0+20)
		<b>Total</b>	<b>20(0+20)</b>

**Experiential Learning Programme (ELP)**

8th Semester

Sl. No.	Course No.	Title of Course	Credit(s)
1	ELP 451	Production of Bio-agents and Botanical pesticides	10(0+10)
2	ELP 452	Commercial Seed Production	10(0+10)
3	ELP 453	Mushroom Cultivation	10(0+10)
4	ELP 454	Soil, Plant and Water Testing	10(0+10)
5	ELP 455	Commercial Beekeeping	10(0+10)
6	ELP 456	Organic Production	10(0+10)
7	ELP 457	Commercial Sericulture	10(0+10)
8	ELP 458	Plant Tissue Culture	10(0+10)
		<b>Total</b>	<b>20(0+20)</b>



## Semester-wise Credit Loads

Sl. No.	Semester	Credits
1	1st Semester	$20+2^*+1^{**}= 23$
2	2nd Semester	$25+1^{**}= 26$
3	3rd Semester	$23+1^{**}= 24$
4	4th Semester	$22+3 = 25$
5	5th Semester	$21+3 = 24$
6	6th Semester	$19+3 = 22$
7	7th Semester	20
8	8th Semester	20
	Total	184

**Note:**

Core Courses = 135 credits,  
 Elective Courses = 9 credits,  
 RAWE & AIA = 20 credits and  
 ELP = 20 credits



## Faculty Members

### **Prof. Dharani Dhar Patra**

Director,  
School of Agricultural Sciences  
Ex Vice Chancellor  
Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia.  
Research interest:  
Soil chemistry, Isotope technique, Stress Soils  
Phytoremediation, Secondary metabolites, Industrial plants



### **Dr. Deblina Ghosh**

Ph.D (Agricultural Chemistry and Soil Science)  
BCKV, Mohanpur, Nadia  
Research interest:  
Soil chemistry, Soil fertility, Secondary nutrients



### **Dr. Anindita Das**

Ph.D. (Agronomy)  
BCKV, Mohanpur, Nadia  
Research interest:  
Nutrient management, crop production



### **Dr. Shamik Dey**

Ph.D. (Agricultural Entomology)  
BCKV, Mohanpur, Nadia  
Research interest:  
Insect pest dynamics, Management of insect pest, Soil  
Acarology





**Dr. Soham Hazra**

Ph.D. (Genetics and Plant Breeding)

BCKV, Mohanpur, Nadia

Research Interest:

Mutation Breeding, Quantitative Genetics, Marker Assisted Selection



**Ms. Amrita Dasgupta**

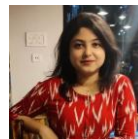
M.Sc (Ag.), Plant Pathology

Visiting Research Scholar- Texas A&M University

BCKV, Mohanpur, Nadia.

Research interest:

Plant microbial interaction, Plant Bacteriology, Conservation Agriculture



**Ms. Shrirupa Sen**

Assistant Professor

M.Sc in Clinical Linguistic, MA in Linguistic,

Research interest:

Language Acquisition, Bilingualism/Multilingualism, Development Disorder like Autism Spectrum Disorder (ASD)



**Dr. Saurav Roy**

Ph.D. (Horticulture)

BCKV, Mohanpur, Nadia

Research Interest:

Horticulture, Arboriculture, Forestry, Germplasm evaluation, Varietal development, Landscaping, Gardening, Propagation



**Dr. Jhuma Biswas**

Ph.D. Microbiology (C.U), Post Ph.D. (C.U)

Research Interest:

Bioprospecting of Halophiles, Biopolymers, Antibiotics, Plant microbe interaction, Environmental Microbiology



**Dr. Suparna Sarkar**

Ph.D. (Agricultural Economics)

BCKV, Mohanpur, Nadia

Research Interest:

SHGs, Cost of Cultivation and Production



**Mrs. Ananya Baidya**

M.Sc (Ag.), Plant Physiology

BCKV, Mohanpur, Nadia

Research Interest:

Stress Physiology, NeuroPhysiology



**Dr. Ajit Kumar**

Ph.D. (Livestock Production Management)

WBUAFS, Kolkata

Research Interest:

Livestock Farm Management, Small Animal Veterinary practice



### **UNIQUE FEATURES OF THE CAMPUS**

- Sprawling campus with equipped class rooms
- Well-equipped Laboratories
- Smart Class Rooms
- Well-equipped Library
- Teaching farm-Close to the campus
- Auditorium
- Meeting room
- Hostel accommodation for boys and girls
- Qualified and trained teachers
- Highly experienced adjunct faculties

### **OTHER UNIQUE FACILITIES**

- 100 % assured Campus placement
- Hands-on-Training with Corporate sectors
- Scholarship for meritorious students
- ICAR approved syllabus

### **COACHING AND PERSONALITY DEVELOPMENT**

- Coaching for bank examinations
- Coaching for ICAR-JRF Exams
- Personality Development
- Special coaching for spoken english

## Facilities & Amenities



**Help Line: 8697743361/62 & 9073322509**

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